**Problem 48 Racing car**

**package** doselect48;

**import** java.lang.Math;

**public** **class** RacingCar {

**int** speed;

**int** distance;

**int** petrolRate;

**public** RacingCar(**int** speed, **int** distance, **int** petrolRate) {

**this**.speed=speed;

**this**.distance=distance;

**this**.petrolRate=petrolRate;

}

**public** **int** validateCar(**int** time) **throws** LowSpeedException,HighSpeedException{

**if**((Math.*ceil*(distance/time)) > time) {

**throw** **new** LowSpeedException("Upgrade Car");

}

**else** **if** ((Math.*ceil*(distance/time)) < time) {

**throw** **new** HighSpeedException("Accident Chances");

}

**else**

**return** calculateprice();

}

**public** **int** calculateprice() {

**return** (**int**) Math.*ceil*(distance/petrolRate);

}

}

**package** doselect48;

**public** **class** HighSpeedException **extends** Exception{

**public** HighSpeedException(String msg) {

**super**(msg);

}

}

**package** doselect48;

**public** **class** LowSpeedException **extends** Exception{

**public** LowSpeedException(String msg) {

**super**(msg);

}

}

**package** doselect48;

**public** **class** main {

**public** **static** **void** main(String[] args) **throws** Exception {

RacingCar car = **new** RacingCar(100,1000,11);

**try** {

System.***out***.println( car.validateCar(50));

}

**catch**(Exception e1) {

System.***out***.println(e1);

}

}

}